



(web) maps

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maps

maps

maps are spatial structures

maps are made of tables

maps are science, technology and art

map design

know your data, tools and audience

map projections

perception of visual cues

design principles for thematic maps

types of maps

dot distribution maps

graduated symbol maps

choropleth maps

flow and network maps

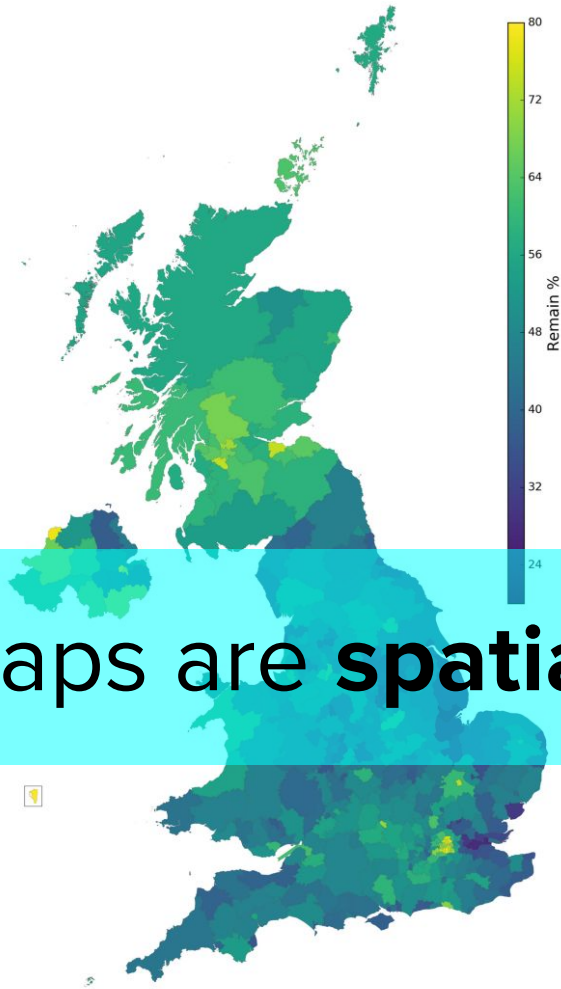
cartograms



A map is a **symbolic depiction** emphasizing relationships between elements of some space, such as objects, regions, or themes.

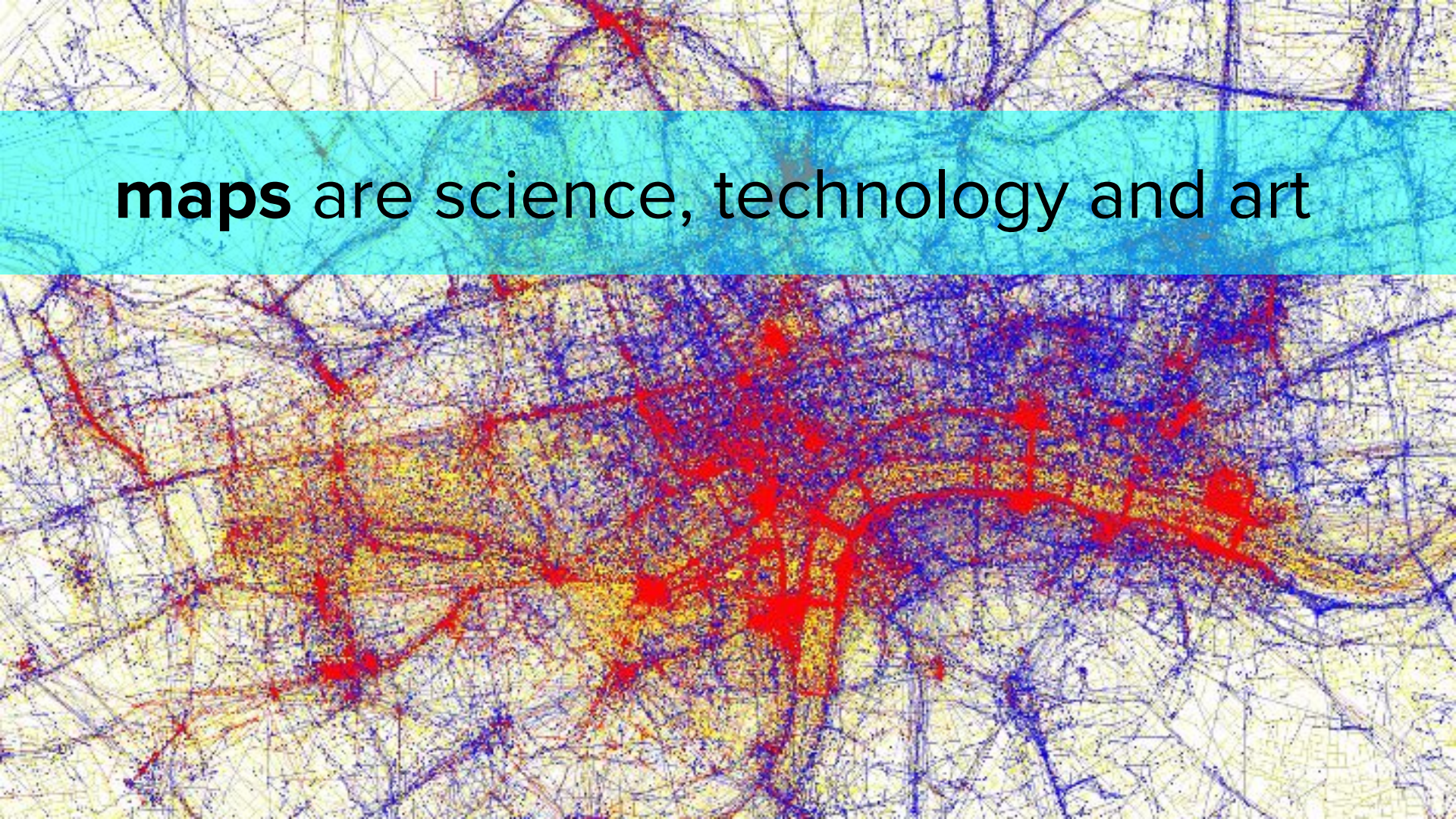
~ Wikipedia

maps are **spatial structures**



id	geom	col_category	col_numeric	col_boolean	col_date
1	Point	burglary	1200	true	10-1-2017 08:04
2	Point	assault	3300	false	23-2-2017 17:21
3	Point	robbery	600	false	24-2-2017 09:45
4	Point	assault	4000	true	30-3-2017 21:33
5	Point	burglary	240	true	10-2-2017 11:08
6	Point	robbery	900	true	10-2-2017 16:13
...
n	Point	assault	2700	true	10-2-2017 04:36

maps are made of **tables**



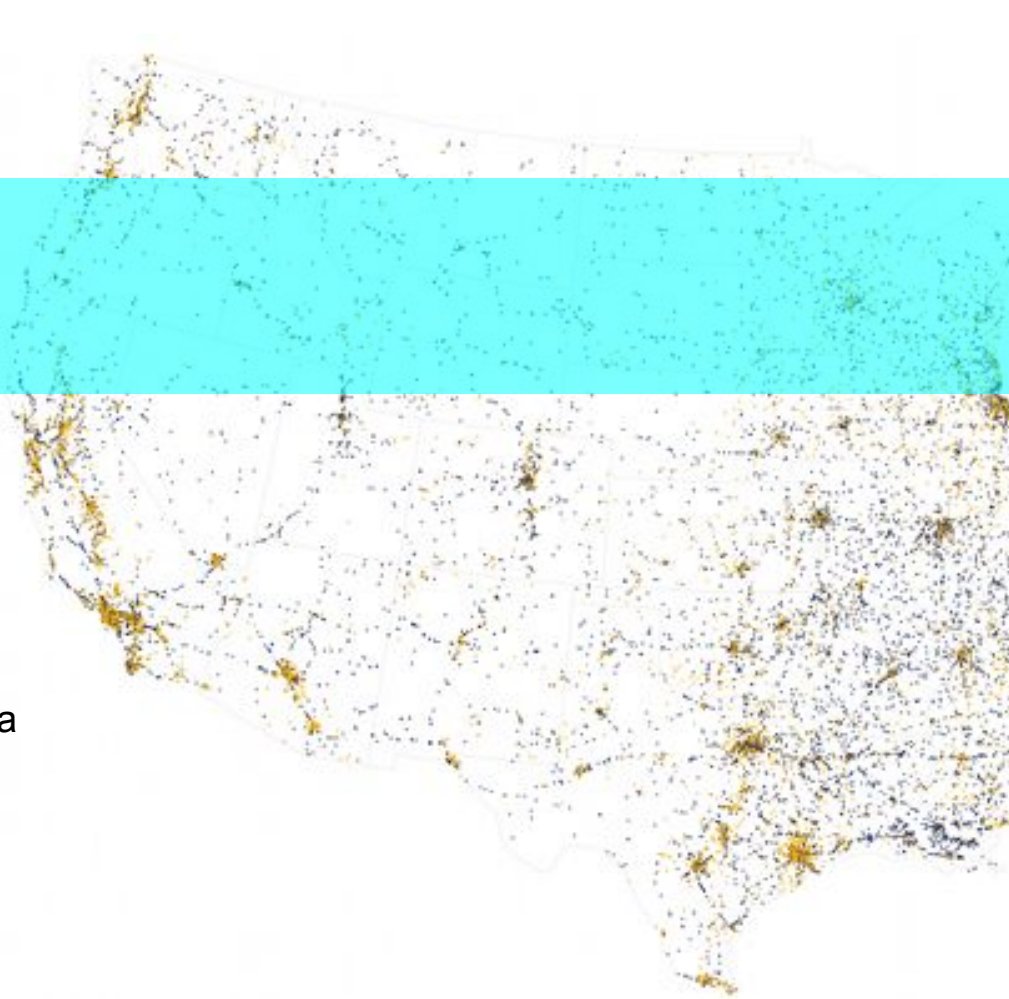
maps are science, technology and art

know your **data**

Data is more than numbers, and to visualize it,
you must know what it represents.
Data represents real life.

It's a snapshot of the world in the same way that a
photograph captures a small moment in time.

~ Nathan Young, *Data Points*





L Train Line

ltrainroute

DATA ANALYSIS STYLE POP-UP LEGEND

2 Style

CHANGE THE VISUALIZATION

FILL

8...12

STROKE

SOLID BY VALUE

← Default color

BLENDING

USING

LABELS

FONT

SIZE / COLOR

HALO

OFFSET

OVERLAP

PLACEMENT

E5362B 229 54 43 1.0

HEX R G B A

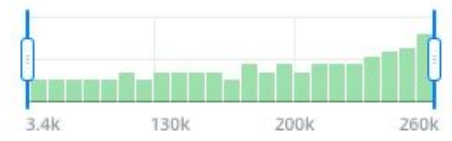
True False

Point



Per Capita Income

ALL SELECTED



Segments

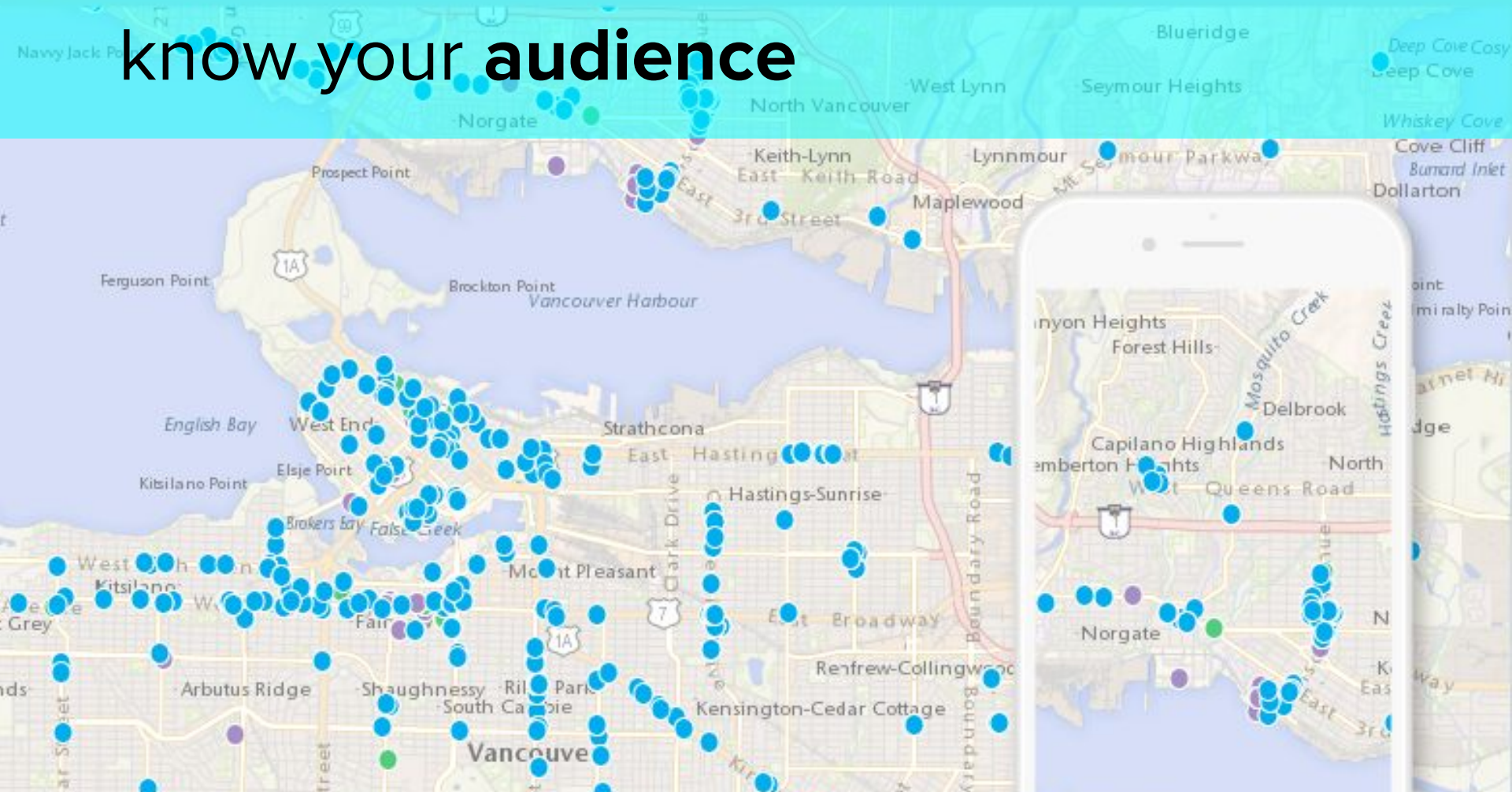
ALL SELECTED

- BACHELORS DEGREE MID INCO... -179K
- WHITE AND MINORITY MIX MU... -160K
- WEALTHY TRANSPLANTS DISPL... -87K
- PREDOMINANTLY BLACK RENT... -61K

47 MORE CATEGORIES

know your tools

know your audience

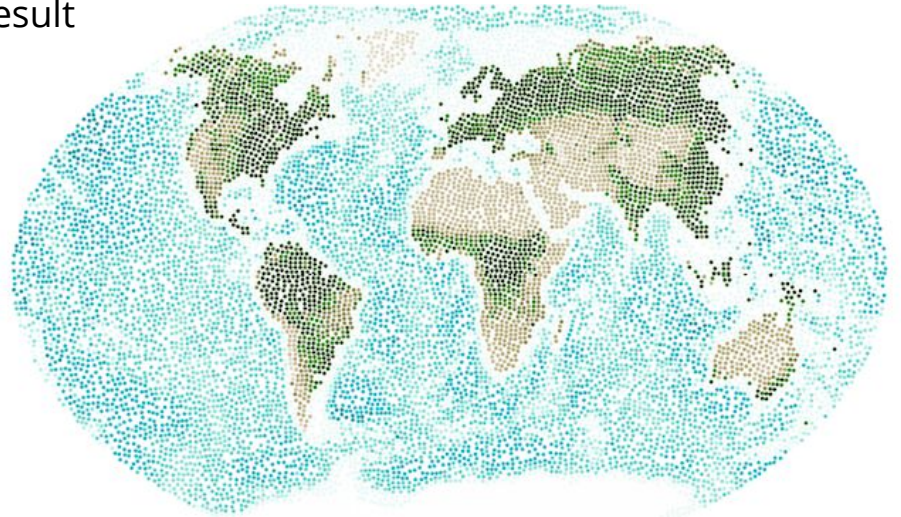


map projections

Map projections are mathematical transformations of the curved three-dimensional surface of the globe onto a flat, two-dimensional plane.

All map projections involve transformations that result in distortions of one or more of the geometric properties of angles, areas, shapes and directions.

~ Isabel Meirelles, *Design for Information*



perception of **visual cues**

Position

Length

Angle

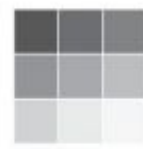
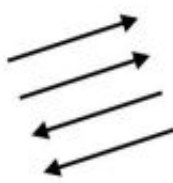
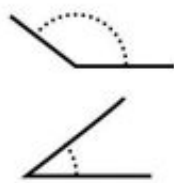
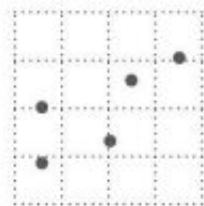
Direction

Area

Volume

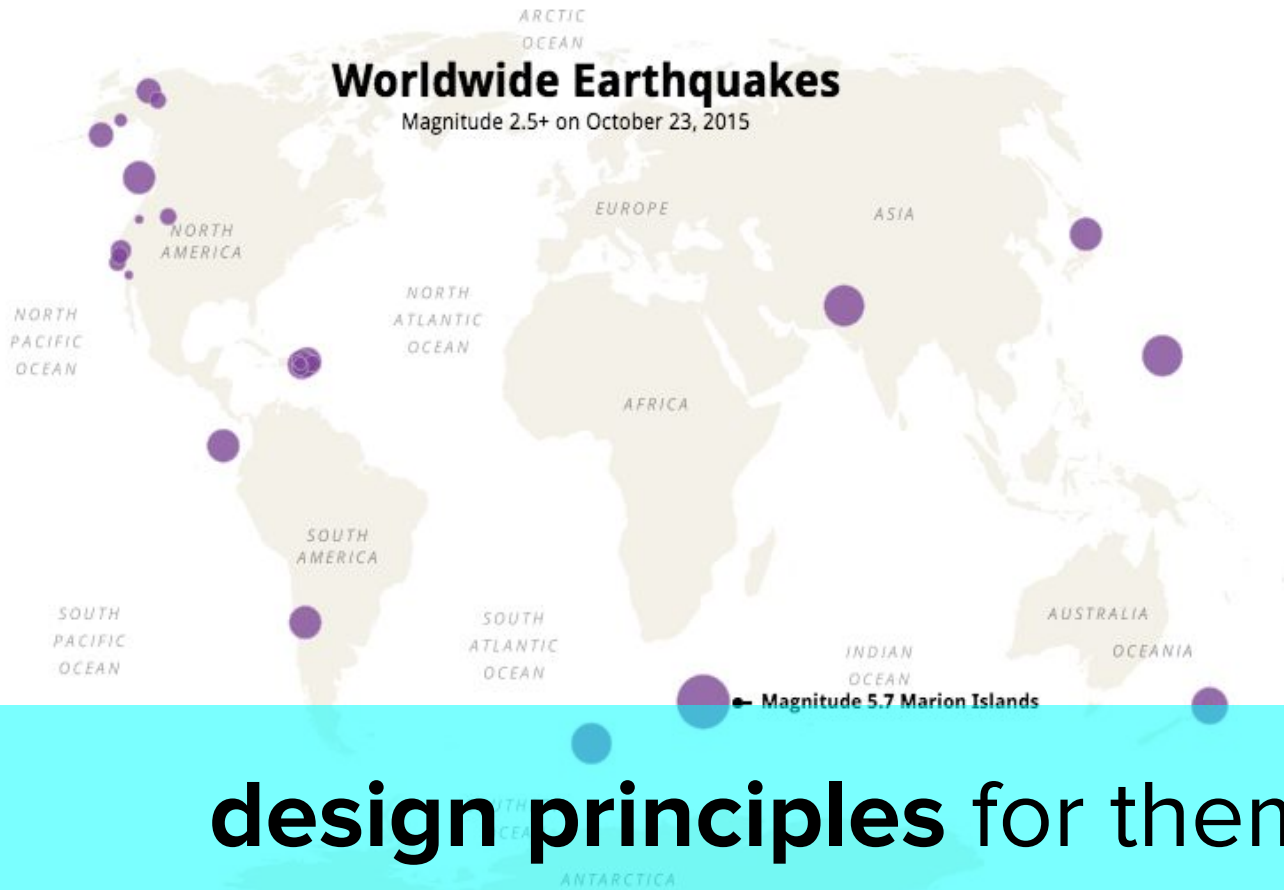
Saturation

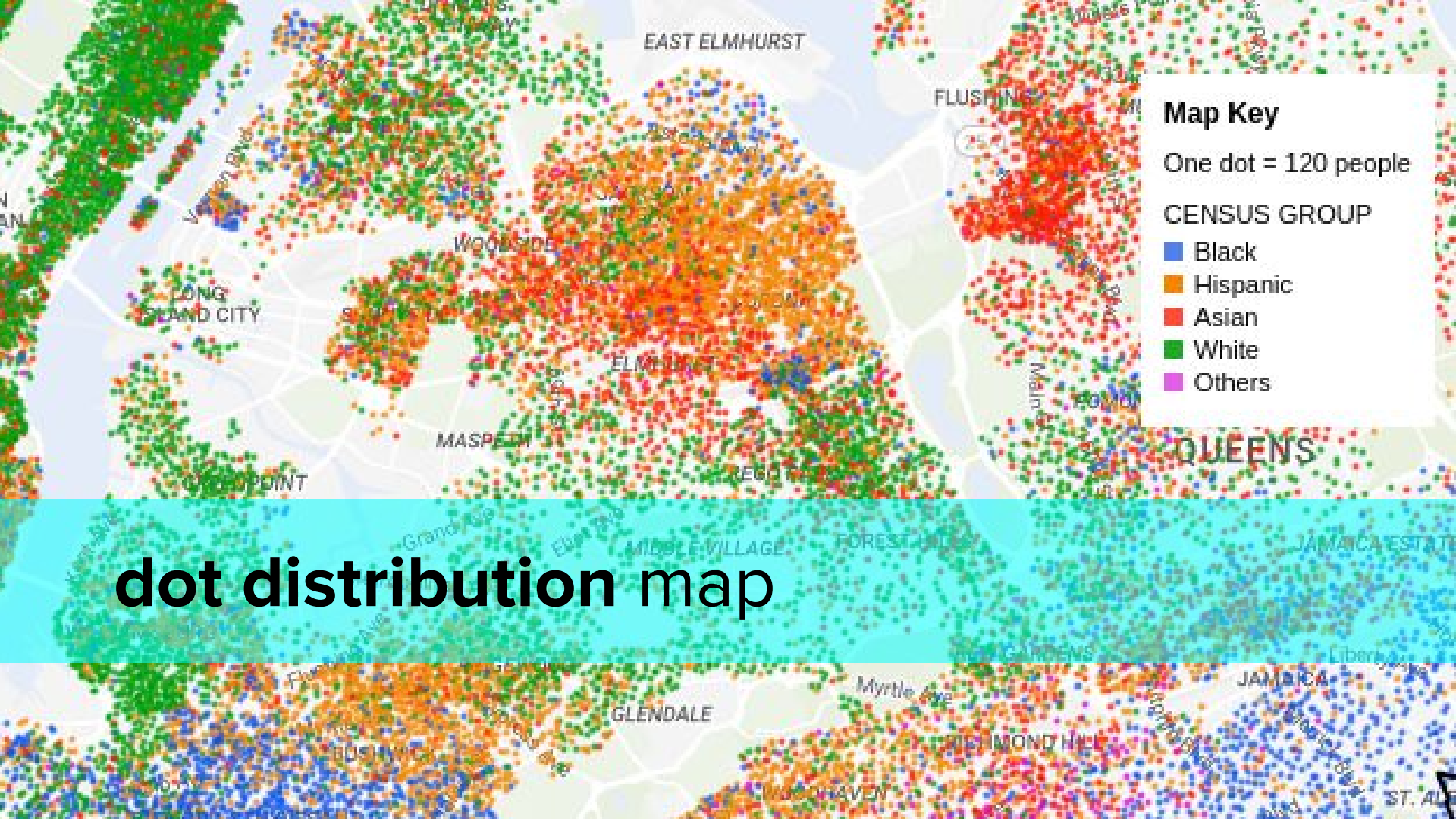
Hue



**More
accurate**

**Less
accurate**





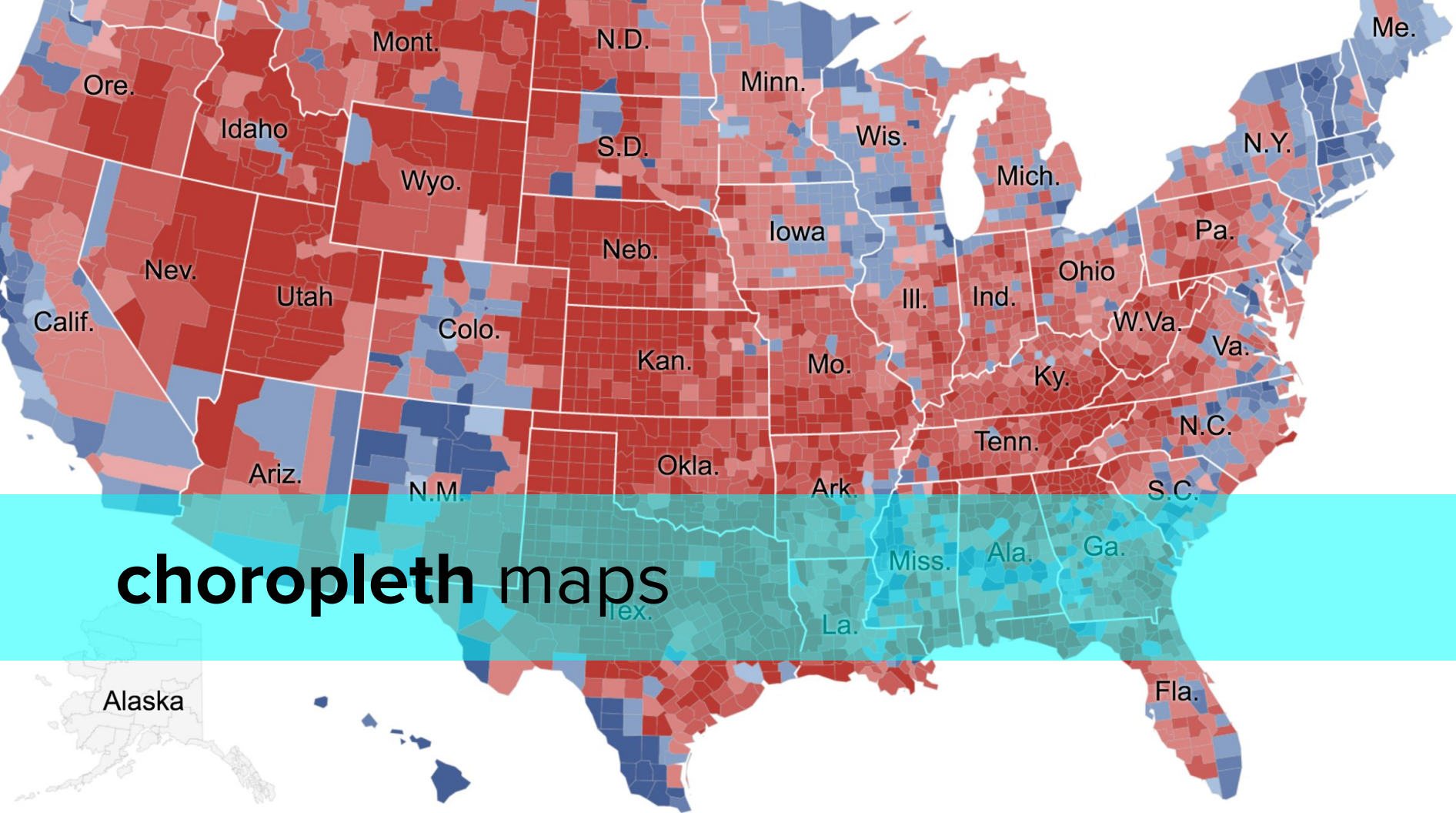
dot distribution map

Map key

Circle size is proportional to the amount each county's leading candidate is ahead.

graduated symbol maps





choropleth maps

Number of data classes: 7

how to use updates downloads credits

COLORBREWER 2.0

color advice for cartography

Nature of your data:

- sequential
- diverging
- qualitative

Pick a color scheme:

Multi-hue:

Single hue:

Only show:

- colorblind safe
- print friendly
- photocopy safe

Context:

- roads
- cities
- borders

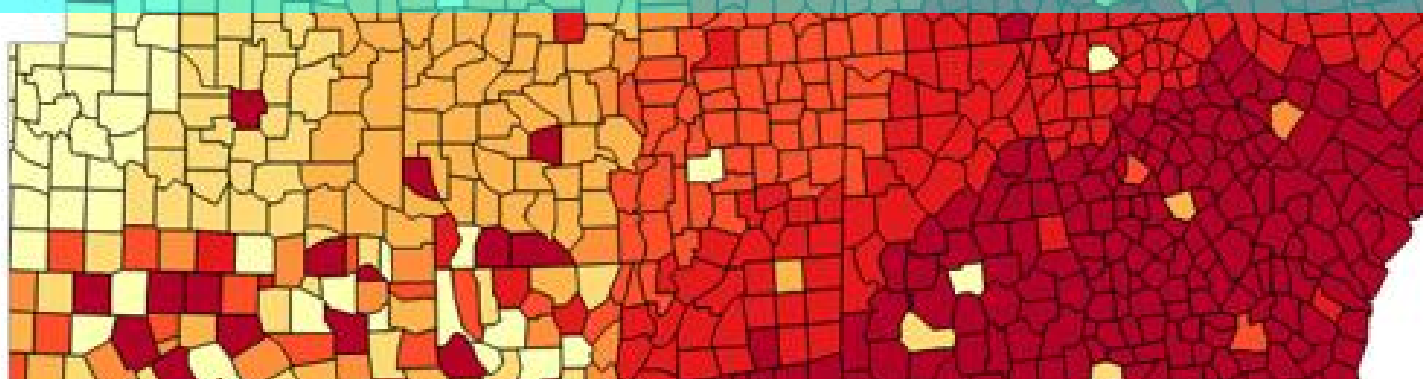
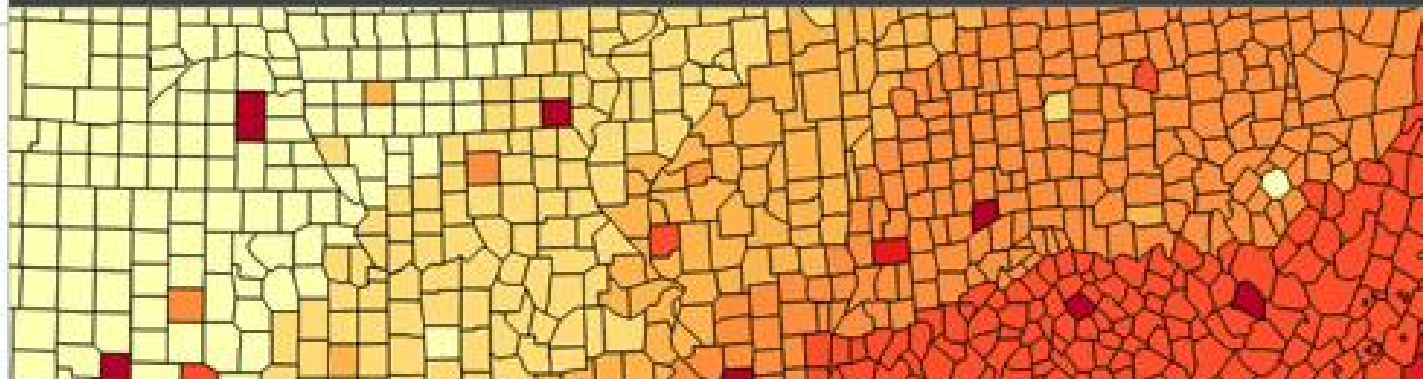
Background:

- solid color
- terrain

7-class YlOrRd

HEX

	#ffffb2
	#fed976
	#feb24c
	#fd8d3c
	#fc4e2a
	#e31a1c
	#b10026



color brewer

← Population Density... ⋮

pop_dataset

DATA ANALYSIS STYLE POP-UP LEGEND

2 Style

CHANGE THE VISUALIZATION

FILL

8...12

STR SOLID BY VALUE

CARTOcolors

CLU Equal interval ...

5 buckets ...



Custom color set

OVERLAP

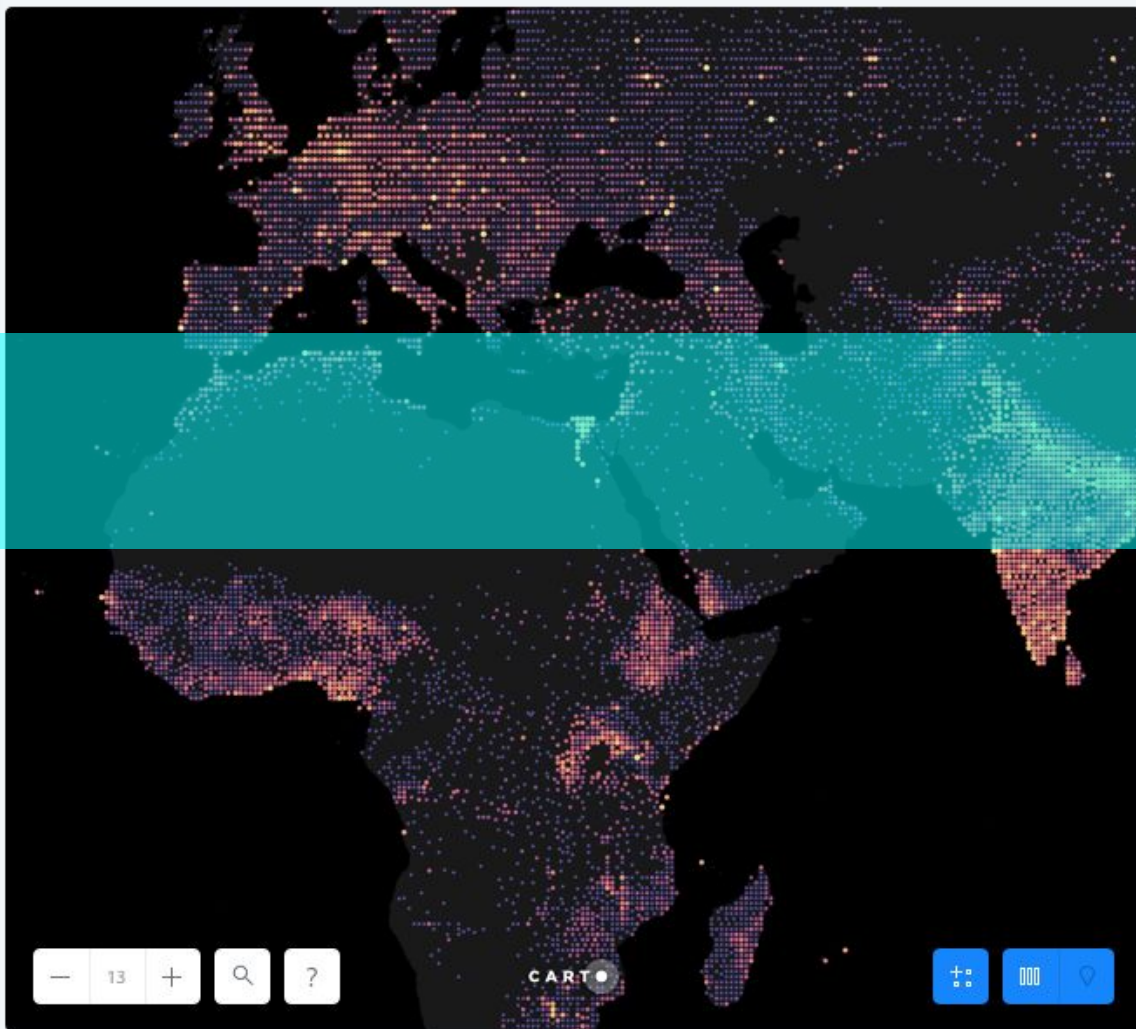


True



False

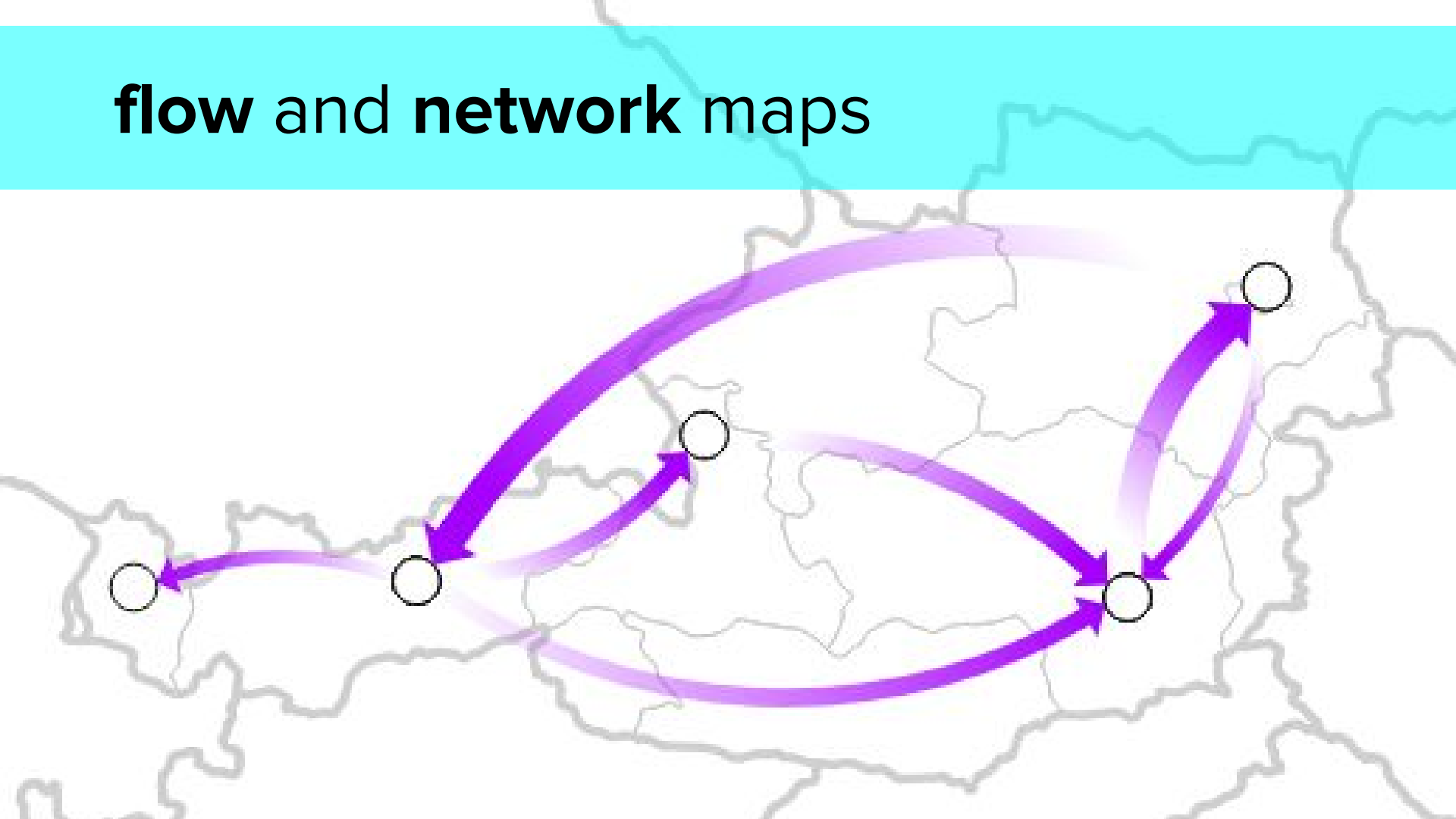
VALUES CARTOCSS



CARTO



flow and network maps



cartograms



references